



2017 Stream Survey Report

MILL CREEK TREND SITE

(WBIC 299700)

Shawano County

Prepared by Joe Dax

Introduction and Survey Objectives

Mill Creek is a Class I and II trout stream consisting of 22.57 miles of trout water in Shawano County. Brook trout is the dominant salmonid with low numbers of brown trout found in the lower reaches. Fishing access is limited to road crossings only. Objectives of the trend survey are to monitor relative abundance and size structure of trout.

Regulations Category: **Red**

Size Limit: Brown and Rainbow trout over 12 inches
Brook trout over 8 inches

Daily Bag Limit: 3 (in total)

WISCONSIN DNR CONTACT INFO.

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Jason Breeggemann - Fisheries Biologist

Elliot Hoffman - Fisheries Technician

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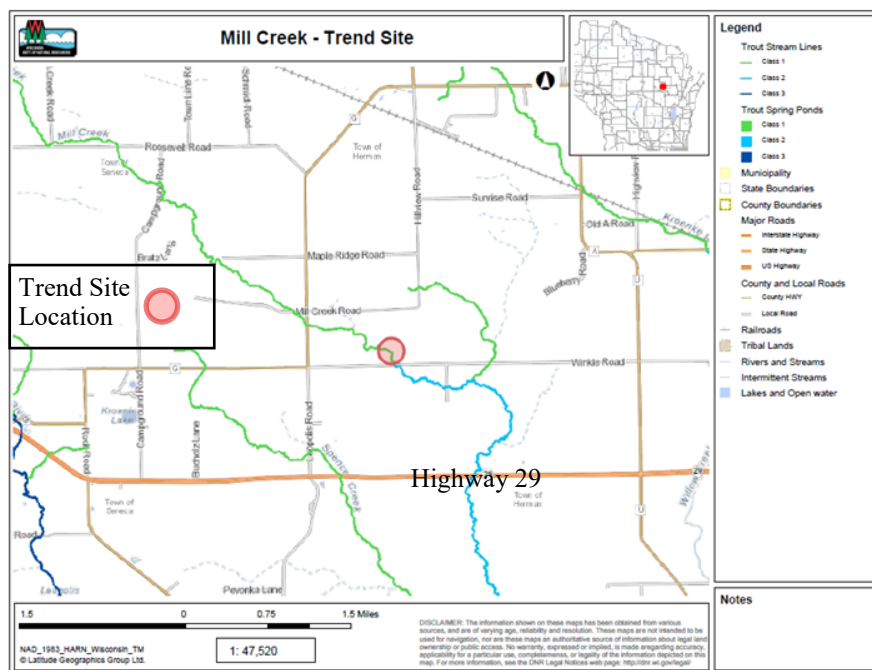
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Survey Information

Site location	Survey Date	Station Length	Water Temperature (°F)	GPS (Start/Finish)	Gear	Number of Netters
Winkle Rd. Trend Site	08/01/2017	1,250 ft.	61	44.8115,-88.8216 44.8132,-88.8228	Towed Barge Shocker	3



Survey Method

- The Mill Creek trend site has been surveyed annually since 2007. In 2014, the sampling distance for this site was extended from 750 feet to 1200 feet and then to 1250 feet in 2015. Sampling gear consisted of a towed barge streamshocker. All captured trout are identified to species, and measured for length.
- Metrics used to evaluate fish populations include catch per unit effort by size class and length frequency distributions.



Metric Descriptions

- Catch per unit effort (CPUE)** is a method of quantifying fish population relative abundance. For all trout surveys, we typically quantify CPUE as the number of a given size class of trout captured per mile of stream. CPUE indexes are compared to other trout streams throughout the state of Wisconsin by what percentile (PCTL) they fall out in. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state. CPUE percentiles can also be used to categorize trout abundance as low density (<33rd percentile), moderate density (33rd - 66th percentile), high density (66th - 90th percentile), and very high density (> 90th percentile).
- Length frequency distribution** is a graphical representation of the number or percentage of fish captured by half inch or one inch size intervals.



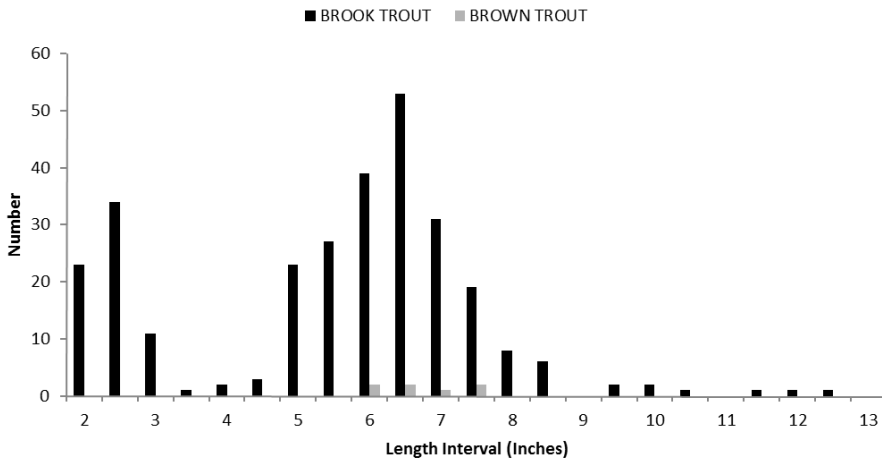
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Brook and Brown Trout Length Distribution, N = 295



Size and Abundance (CPUE) Metrics - Brook Trout

Year	Average Length (Inches)	Length Range (Inches)	Number Sampled	CPUE calculated as the number of trout of a given size per mile (Number in parentheses represents the statewide percentile of a given metric)					
				Total CPUE (PCTL)	YOY CPUE	≥5" CPUE (PCTL)	≥8" CPUE (PCTL)	≥10" CPUE (PCTL)	≥12" CPUE (PCTL)
1992	5.2	(2.0-11.2)	234	839	326	509	68	29	0
1996	5.0	(2.0-13.1)	251	1768	880	838	162	35	14
1997	3.9	(2.0-9.2)	417	2936	2106	803	42	0	0
1998	4.8	(1.9-10.5)	463	3261	1162	1824	134	7	0
1999	4.3	(2.0-11.9)	295	2077	965	838	42	7	0
2000	5.9	(2.4-12.6)	200	1408	324	1056	155	42	7
2001	5.1	(2.2-11.1)	179	1260	77	711	197	35	0
2005	4.6	(1.6-11.6)	451	3790	1496	1899	244	34	0
2007	6.1	(2.4-11.4)	171	1204 (85th)	77	915 (95th)	162 (90th)	28 (90th)	0
2008	4.0	(2.0-10.5)	224	1577 (90th)	1099	479 (85th)	106 (85th)	21 (85th)	0
2009	5.2	(2.0-10.2)	219	1646 (90th)	316	1008 (95th)	83 (80th)	15 (80th)	0
2010	6.4	(2.2-10.4)	101	711 (80th)	92	592 (90th)	134 (90th)	14 (80th)	0
2011	7.6	(2.8-12.0)	61	430 (65th)	42	387 (80th)	190 (95th)	42 (95th)	7 (90th)
2012	6.0	(2.2-11.9)	246	1732 (90th)	113	1401 (95th)	127 (90th)	49 (95th)	0
2013	4.6	(2.0-9.5)	102	718 (80th)	373	324 (80th)	70 (80th)	0	0
2014	5.2	(1.8-10.9)	264	1161 (85th)	270	787 (95th)	57 (75th)	13 (80th)	0
2015	5.9	(2.0-9.8)	216	900 (85th)	104	742 (90th)	54 (75th)	0	0
2016	5.8	(1.5-10.8)	217	917 (85th)	274	637 (90th)	118 (90th)	21 (85th)	0
2017	5.8	(2.0-12.8)	288	1217 (85th)	291	903 (95th)	93 (85th)	25 (85th)	8 (90th)

Summary

- Results from the 2017 survey showed that brook trout density in Mill Creek continues to remain high. Catch per unit effort for the total number of brook trout captured along with all adult size classes remain at, or above the 85th percentile when compared to trout streams throughout the state of Wisconsin. Furthermore, the density of brook trout in 2017 was the highest it has been since 2012.
- The majority of adult brook trout captured were between 5-8 inches and the density of brook trout ≥ 5 " has increased 42% from the last survey in 2016. These fish should provide a really nice fishery in Mill Creek in the next year or two.
- Density of young of year (YOY) brook trout in 2017 was slightly higher than what was observed in 2016, and was the highest observed since 2013. Consistent recruitment will ensure a strong brook trout fishery into the future.
- Opportunities exist to catch a true trophy brook trout in Mill Creek. The largest trout sampled in 2017 was 12.8 inches and this year was only the 4th year in which brook trout ≥ 12.0 inches were captured.
- Water levels in 2017 were higher than what had been observed in the past couple of years, and could explain why trout numbers were higher this year compared to the past couple of years.
- Brown trout densities continue to remain low at this site. However, if water temperatures warm, conditions may become more favorable for brown trout and numbers may increase in the future.